

### We contribute with our actions

SPOKESPERSON'S BRIEF 2018

### Getting our story out

### THE AIM OF THIS SPOKESPERSON'S BRIEF IS SIMPLE:

To help you better understand the essentials of both Walki's brand and products. It pinpoints why the company exists, which kind of products we offer and the unique value you gain by co-operating with us.

There's, of course, much more to the story, so if you'd like to dig deeper please feel free to contact our CEO at any time.

# We contribute with our actions

Our solutions and products are present in everyday life. Food packaging, keeping our homes warm and enjoying the produce of bio-farming are all important parts of our daily lives. This position makes us well placed to take our responsibility towards making the world more sustainable.

The world is up against massive challenges, but these challenges are also offering great opportunities. We think that a well-functioning circular economy, resource efficiency and a strong focus on bio-based materials can make a substantial difference for the future of our planet. The challenges are huge and we need to set ambitious objectives.

We are committed to serving our customers and innovating together with them with the aim of making a true difference. Innovation is in our DNA. A strong focus on R&D has piloted us through tough times ever since Walki was founded in 1930, and it continues to be our guiding star.

We want and can make a difference.

Leif Frilund, CEO



### Walki at a glance

### TRENDS THAT AFFECT US

- Urbanization and sustainable solutions in building
- Emphasis on health and well-being

- Global citizenship and mass movement of people
- Emphasis on meaningfulness in business
- Awareness of sustainability crisis
- Fluctuating energy prices and demand for energy-efficient solutions
- Reduction of plastic waste
- · Increased efforts in bio-farming

### OUR STORY



Walki's origins date back to 1930. The company *Paperituote* was founded in Valkeakoski by the Finnish industrialist Rudolf Walden. In 1965, the first extrusion coating line was started in the Valkeakoski plant.

Walki's international expansion took off in 1979, when a new plant was established in Steinfurt, Germany. Today we have 10 production plants in Finland, Germany, the Netherlands, Poland, the UK, Russia and China. With more than 85 years of product development experience, we continue to invest in state-of-the-art production technology.

### WHAT ARE WE LIKE?

Everyone at Walki is driven by the quest of finding new ways of making things better. Every single day we ask ourselves: Is there a smarter way to do this? It may be a special need a customer might have, or an operational challenge on how to act smarter in our organisation.

The quest for finding smarter ways do to things is a passion we all share.



Our core expertise is in coating and laminating paper and board. We know how to create barrier properties that protect the packed material against moisture, oxygen and grease.

Over 80% of Walki's products are currently made out of plant-based renewables. The plan is to hit 100% by year 2030.

### WE HAVE A VERY RESILIENT ORGANIZATION

The world is a fast-changing place. As the future is exponential and not linear, we have to think exponentially and expect the unlikely. Not only do you need an agile organisation for this, but also a resilient one. Agility is needed to manage the quick turns the world can take. Resilience is needed to withstand the pressure that comes with change.





WHAT DRIVES US TO WORK EVERY DAY

Our mission is to contribute to the global resource efficiency efforts by developing energy and material efficient solutions to our customers.

and always offering our best expertise to improve our customer's business.

Integrity also means that we are respectful of each other and enhance mutual respect and confidence across all borders.

market environment, while at the same time never neglecting demands for quality and thoroughness.

All our employees should feel empowered to resolve problems quickly and not have to delegate them to others.

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doomed. We must recommit ourselves daily to doing great client work.

It takes real commitment. Going the extra mile. Being ready to work harder and smarter than ever before.

# **3 BUSINESS AREAS**

CONSUMER PACKAGING INDUSTRIAL PACKAGING



### Walki's role in the world

We can contribute to a better life for individuals and a sounder planet. Climate change and exponential population growth are posing huge challenges to humankind. We are able to provide the solutions that can make substantial contributions to a more sustainable way of living. We believe in actions.

### **RESOURCE EFFICIENCY**

We can make crucial contributions in making the world more resource efficient when it comes to energy and materials.

### CIRCULAR ECONOMY

We believe in the circular economy. Our aim is to provide the world with materials that are 100% recyclable.

### PASSING ON WHAT WE KNOW

The future lies in our children. We can contribute by teaching kids about the circular economy and inspiring them to embrace it.

### A SAFE PLACE TO WORK

We are dedicated to making our organisation a safe place to work where everyone can find their place and see their role in the bigger picture.

### MINIMISE PLASTICS

Plastics can mostly be replaced by bio-based solutions, like wood fibers or plant-based polymers. We innovate materials with the right features and that can be recycled or in some cases can be biodegradable.



#### **TEACHING THE YOUNG**

We collaborate with **Dr. Leyla Acaroglu** – designer, sociologist and UN Champion of the Earth 2016. She is, with her in-depth knowledge of the circular economy, the perfect inspirer, a person who can make complex mechanisms both easy to grasp and interesting. Leyla has taken an active stand for the need for systematic thinking on the circular economy. She believes that understanding cause and effect is a skill that will help us come up with true innovations.

We are very excited about this collaboration and wish to be able to contribute to society by providing upper high school teachers and students with high-quality educational materials produced by Leyla, materials that will help young people understand the concept of circular economy and what it takes to make it come true.

### Walki & our world in numbers





of plastic packaging never reaches collection systems.



million tons of plastics is dumped into the oceans every year and more than 300 million tons of fossil based plastics is produced annually.

### A zero waste future

Waste is becoming one of the biggest challenges of our times. We believe in a future where packaging materials can be 100% bio-based and recyclable.

> How we pack our food and other goods will have a crucial impact on the amount of waste we leave behind. Future packaging solutions have to be bio-based and recyclable. In some applications they should also ne biodegradable.

### "Everybody wants to move away from plastics and aluminum"

One of the fastest growing segments of the packaging industry is flexible packaging. It combines different materials to make sure that the packaging has the right properties to protect food and other goods while minimizing the use of harmful fossil based materials such as oil-based plastics.

Flexible packaging ensures food safety, extends shelf life and gives barrier protection while also providing great printability, especially important for consumer goods that need to appeal to the end user.

Walki's Green Flexible Packaging substrates are a combination of paper and other materials

to meet the requirements of protection, hygiene, product shelf life, and sustainability. While fossil-based plastics and aluminum foil have for decades been used to meet these demands, we are increasingly moving towards plant-based, i.e. bio-based options

The transition to a low-carbon and circular economy, stronger policies supporting the growing bio-economy, and increased consumer awareness of sustainability issues will lead to the global market for biopolymers growing by more than 20% by 2023, according to a market report by European Bioplastics.

At Walki, we think we can do faster and better. We believe we can make a biobased polymer with the same (or better) oxygen barrier as with a fossil based material currently used. And we also believe that our customers will be ready to go for slightly more expensive alternative of having bio-based or even in some cases biodegradable packaging materials.

The young generation is demanding more sustainable options. On day all packaging materials will be completely recyclable. There is simply no other way if we are to take care of the planet for our children and future generations. At Walki, we have the best assets to make this transition happen.

### WALKI'S FLEXIBLE PACKAGING

**Walki®Seal** 

EATES SHELF APP EASY TO OPEN TABLE FOR DRY F

**Valki®Sea** 

- is lightweight and easy to open
- is plant-based
- extends shelf life, reducing food waste
- requires less energy to manufacture and to transport
- creates shelf appeal
- uses less energy and creates fewer emissions
- reduces shelf space

#### COFFEE PODS MADE GREEN

Every year millions of coffee capsules made out of aluminum are sold. What if all those capsules were bio-based? We can provide a bio-based option.





### Towards sustainable & plastic-free farming

Plastic is not only a huge problem in our oceans. As farmers use plastic-based mulching material, it risks getting accumulated in our fields too. Walki's biodegradable, Walki®Agripap, paper-based mulch is the answer.

> Mulching paper can be a farmer's best friend. Mulch is a layer of material applied to the surface of an area of soil. By covering the soil, mulching paper conserves moisture, which improves the fertility of the soil and keeps weed growth at bay.

"A million tonnes of plastic films are used for mulching every year around the world."

> So far, the mulching covers used have mainly been plastic. The removal and correct disposal of the plastic mulch is a cumbersome and expensive process. This increases the risk of the plastic being left on the fields and accumulated in the soil over time. Even if you remove it, the mulch often leaves behind plastic residue that pollutes the soil and reduces its future growth potential. Yields from polluted soil can be up to 20% lower than those from non-polluted soil.

Walki's paper-based and 100% biodegradable mulching paper solves this problem.

Walki<sup>®</sup>Agripap is a plastic-free biodegradable mulching paper. It consists of a strong paper coated with biodegradable coating that provides barrier properties and an optimal time for the material to decompose. The plants are protected during the growing season, but soon after the mulching papers starts to decompose, so the farmer does not have to collect the mulching material from the field.

Tests show that Walki®Agripap gives excellent weed control results, optimal growth conditions, excellent crop yields and improved durability. Farmers can be both resource efficient and sustainable.

The environment is the big winner: no soil pollution and zero waste.



### **WALKI®AGRIPAP**

- is an organic mulching solution that has been made from natural biodegradable fibres
- is a paper-based, plastic free biodegradable mulching material that conserves moisture
- improves the fertility of soil
- controls weed growth
- reduces the need for pesticides, fertilizers and irrigation.
- · absorbs more heat from the sun to the soil as the paper is black

### **TRIED AND TESTED**

Walki<sup>®</sup>Agripap is as efficient in increasing the yield as nondegradable plastic film. Independent research conducted in Finland tested biodegradable mulches for growing iceberg lettuce and onions. The results have been very convincing: Walki®Agripap is easy to lay in the fields and delivers excellent weed control.

#### MAKING ORGANIC FARMING EASIER

Walki's biodegradable mulching paper is interesting to organic farmers all around the world. The mulching paper will be further developed together with equipment manufacturers and farmers to fit the climatic conditions on Europe's main mulching markets: Spain, France and Italy. Although Walki's biodegradable option is slightly more expensive than plastic mulch, you don't have to go through the expensive and laborious process of removing it from the field and getting rid of the waste.

### Making good use of energy-efficient leftovers

Logging residue is an efficient and inexpensive source of biofuel. The right cover maximises the energy content and ultimately leads to less CO2 emissions - Walki<sup>®</sup>Biomass Cover.

> Wood is an important raw material. Harvesting the trees leaves you with branches and small diameter trees. This logging residue can be put to good use as biofuels. The energy content of the logging residue can be significantly improved by letting it dry on the ground before being stored. Walki has innovated a paper-based and waterproof cover that shelters the residue from rain, snow and ice. More energy from the logging residue means generating more bio-based electricity. This will lower fossil CO2 emissions

"Getting more energy from the logging residues eventually slows down the greenhouse effect."

> The cover consists of a paper-based laminate with a polymer-based moisture barrier to protect the residue from moist. It is laid on top of the residue using the same machinery that gathers the residue. As the cover mainly consists of renewable fibrous materials, it can be easily chipped and burned along with the

residue. The top of the pile is sheltered while the sides remain open to allow for moisture to evaporate.

### Lighter and greener

Walki's Biomass Cover significantly increases the dry content of the logging residues, by as much as 18%. The logging residue becomes substantially lighter, a benefit when the residue is transported from the forest to the power plant. When incinerated, a logging residue with a higher dry content generates more energy. This makes it the sustainable and cost-efficient option. As the cover provides shelter for the logging residue, it can be stored in the forest for several months. Hence, temporary storage is not needed.

More bio-based electricity in our energy mix will be crucial to slow down the greenhouse effect. Maximising the energy from logging residue can make a real difference in lowering CO2 emissions.



#### WALKI®BIOMASS COVER

- comes in two sizes; 4 meters and 6 meters
- increases the dry content of logging residue by up to 18 %
- can be safely disposed by burning

THE WIDTH MATTERS The width of the cover makes a big difference in the energy content of the logging residue. Walki is the only one on the market to offer a six meter wide cover. A Swedish study found that a 6 meter biomass cover more than doubled the effect on DMC (Dry Matter Content) and also brought higher returns to the seller of the residue.

### A NORDIC THING GAINING **POPULARITY IN EUROPE**

Biomass covers are widely used in the Nordic countries, especially in Finland and Sweden. Their popularity is also growing in other parts of Europe as biofuels are becoming increasingly important due to tightening emissions restrictions. New combustion technologies suitable for solid biofuels are also driving demand.

## The breathable house

Dampness in buildings can cause huge challenges, both to our health and to our buildings. Walki<sup>®</sup>Active is an intelligent, breathable membrane.

A report by the World Health Organization (WHO) states that 75-80% of all problems with building constructions are caused by moisture. Not only does moisture cause mold and health hazards, it also damages the structures of buildings.

"There is a need to avoid structural damage to buildings caused by dampness."

> Plastic films or other tight vapour barriers are commonly used as moisture barriers. This triggers moisture challenges. The moisture gets trapped, either due to external intrusion or condensation from within, which causes dampness.

Walki's answer to this challenge is Walki®Active. It is a building membrane with variable vapour transmission rate, made from PP non-woven and function film layer. WalkiActive is used as a vapour control layer in ceilings and walls, ensuring maximum breathability or a high vapour barrier, depending on what is needed due to the weather conditions.

"When the air humidity is low, the vapour barrier property of the laminate is high, and when the humidity is high, the barrier is low. During winter, when it is warmer indoors than outdoors, vapour tends to flow from inside to outside but the functional film layer acts as a vapour barrier. This ensures that virtually no vapour can flow into the structure during cold weather. During summer, on the other hand, the polyethylene-copolymer film opens to allow water vapour to flow from outside to inside.

The key feature is the water vapour barrier property, designed to adapt to environmental and climatic changes.

Fixing moisture problems in existing constructions is an expensive ordeal where resources are not used efficiently. Getting the isolation right from the beginning is the cost-efficient and sustainable option.

Moisture and mold can also cause serious health hazards. With Walki®Active you get a healthy life in a healthy house.



### WALKI®ACTIVE BOTH IN SUMMER AND WINTER

The intelligent Walki®Active membrane can work around in any temperature. When air humidity is low, the vapour barrier property of the laminate is high, and when humidity is high, the barrier is low. During winter, when it is warmer indoors than outdoors, vapour tends to flow from inside to outside, but the functional film layer acts as a vapour barrier. This ensures that virtually no vapour can flow into the structure during cold weather. During summer, on the other hand, the polyethylene-copolymer film opens to allow water vapour to flow from outside to inside.

### A GROWING MARKET

Walki®Active has a huge potential in a growing construction industry, as construction companies are looking for ways to improve the quality and lifespan of buildings. The need for housing is acute in Europe. The UK, the Netherlands and Sweden are a few countries that are short on housing. There is also a wide need for renovation of houses.

### EXTRA PUSH FROM LEGISLATION

Walki®Active saves energy. Requirements for energy efficiency will be tightened as the EU wants to reach its 2020 targets. Energy-efficient insulation will be key.

### Home, safe home

Protecting your home from fire has been high on the agenda since ancient times. Walki's fire-retardant facings can substantially slow the spreading of a possible fire, giving precious time to save human lives.

> Introduction of more combustible materials in buildings may be the reason behind fires in buildings being on the rise – more than 2 million in the EU alone every year. The world has seen amazing innovations in the construction sector in the past decades with new designs, construction methods and building materials; but there are signs that building fires develop faster than before.

"Fires in the EU cause damages of up to 126 billion euros every year."

> The fact remains that you can never entirely fire-proof a building. The construction materials used – timber, steel or aluminium – can catch fire and may collapse in high temperatures. But you can do a lot to hinder the fire from spreading with the right materials. With fire-resistant or fire-retardant construction materials, such as facings used for isolation, you can substantially slow down the spreading of the fire, giving time to save

both people but also the building itself. In partnership with its raw-material suppliers and several universities, Walki embarked on a comprehensive 5-year R&D programme to develop a range of fire retardant, multi-layer products. Multiple layers give flexibility to make materials that suit customers' differing needs.

The EU is well on its way to reach its 2020 targets and is now setting new ones for 2030 and beyond. Energy efficiency in buildings is crucial for the EU to continue on the same path, making suitable isolation more important than ever before.

Stricter regulation on fire safety is also looming. The EU is currently being urged by various organisations to revamp fire protection standards for buildings. The demand for fireretardant materials is clearly on the rise. With flexible fire-retardant materials, Walki is wellpoised to make sure its customers comply with future legislation of fire safety for buildings.





### MULTIPLE LAYERS, MULTIPLE POSSIBILITIES

Walki's fire-retardant materials work like a film. But unlike most films that have a monolayer character, Walki's products can have multiple layers ranging from 3 all the way to 10. Combining different layers enables modifying the facing and imbuing it with different levels of fire resistance to match customers' specific requirements.

### SAFE INSULATION

Walki's fire-retardant facings are typically used as insulation material in buildings. As building materials vary from country to country, they come in different forms, including the Walki®Wool and Walki®Foam family of products to suit the needs of different markets.

### Thinking big with innovation

Customer satisfaction surveys say it all. Walki goes the extra mile to innovate not only for customers, but also for future generations.

> Innovation has always been in the Walki DNA. The innovation process has also always involved a customer: Walki has been a customer-focused company right from the start.

"We are the only one in our business with full blown pilot machinery capabilities."

> Listening to the customer and identifying the needs is what customer orientation is all about. Thanks to solid customer relations and a long track record of innovation we have the experience to read between the lines and identify customer needs sometimes even before they do.

Creative experimenting and testing is crucial for successful R&D. In our Technical Competence Center we are able to efficiently run tests and make experiments to tailor the optimal solutions for our customers. When a new product is developed, several different tests are run and analyzed in-house. Last year alone more then 3 000 tests samples were run. Thanks to the testing facility we can make as many test samples as necessary without any negative impact on normal production. This gives us flexibility to experiment until we find the optimal solution.

We don't innovate only for our customers, but also to tackle the massive challenges the world faces today. The quest for sustainable solutions will intensify. The next step would be to make use of solutions that not only are CO2 emission neutral, but actually contains polymers that are made from CO2 in the atmosphere.

We want to push the world to embrace the circular economy. Practically all of Walki's products are already recyclable and over 60% of the packaging materials that Walki is producing are today made of sustainable materials. The innovation journey never ends and the final goal is to reach 100%.

We want our innovations to make a difference.

### TAILOR-MADE COMPOSITIONS

Walki's key competence is the ability to translate customers' requests and needs into physical values like strength requirements, barrier properties, sealing behavior and other materials needs like anti static, low friction and gloss properties. The possibilities are endless: hundreds of different compositions can be created depending on the customer's needs.

### NETWORK INNOVATION

Walki's innovation team is outward looking and maintains a high-quality network involving material suppliers, universities and research institutes. Research with universities is particularly important in the hunt for the greatest talent. *"We take our responsibility towards making the world more sustainable."* 



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